STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7635

Petition of Central Vermont Public Service Corporation ("CVPS") for a Certificate of Public Good, pursuant to 30 V.S.A. § 248, authorizing the construction of a new 46 kV electrical substation, and the reconstruction of an existing substation containing 46 kV/12.47 kV distribution facilities and step-up facilities for hydro generation, located on Maple Street and Smead Road in Salisbury, Vermont	Hearing at Montpelier, Vermont October 25, 2010

Order entered: 3/3/2011

PRESENT: Thomas Knauer, Hearing Officer

APPEARANCES: Geoffrey Commons, Esq.
for Vermont Department of Public Service

Judith Dillon, Esq.
for Vermont Agency of Natural Resources

Morris Silver, Esq.
for Central Vermont Public Service Corporation

I. INTRODUCTION

This case involves a petition filed with the Public Service Board ("Board") by Central Vermont Public Service Corporation ("CVPS") on June 18, 2010, requesting a certificate of public good pursuant to 30 V.S.A. § 248 authorizing the construction of a new 46 kV electrical substation and the reconstruction of an existing substation containing 46 kV/4.16 kV distribution facilities and generation step-up facilities for a hydroelectric ("hydro") generation station in Salisbury, Vermont. Pursuant to the requirements of 30 V.S.A., CVPS submitted prefiled testimony, proposed findings, and a proposed order.

A Prehearing Conference was convened on August 6, 2010. Appearances were entered for the Department of Public Service ("Department") by Geoffrey Commons, Esq., for the Agency of Natural Resources ("ANR") by Judith Dillon, Esq., and for CVPS by Morris Silver, Esq.

Notice of a Site Visit and Public Hearing for the proposed project, scheduled for September 2, 2010, was published in the *Addison Independent* on August 23, 2010. The Site Visit and Public Hearing were held as scheduled on September 2, 2010. No members of the public participated in the site visit. Approximately five members of the public attended the public hearing and had questions for CVPS, but did not provide comments to the Board on the proposed project.

On September 30, 2010, a Memorandum of Understanding between CVPS and the Department ("MOU") with attachments, including a proposed Order, CPG, and supplemental testimony and revised exhibits, was submitted by CVPS.

A Technical Hearing was held on October 25, 2010, at which the prefiled testimony, exhibits, a joint proposal for decision, and the MOU were entered into the record by stipulation. ANR did not sign the MOU, but did not offer its own prefiled testimony or object to the MOU.

On November 8, 2010, CVPS filed additional information that was requested at the technical hearing. No party objected to the admission of this filing.

On January 31, 2011, CVPS filed supplemental testimony that was requested by the Hearing Officer in a January 10, 2011, memorandum. CVPS represented that the parties agreed to the admission of the testimony without hearing or objection.

I have reviewed the Petition, the supporting testimony and exhibits, and supplemental filings. In this Proposal for Decision I recommend that the Board approve the proposed project and issue a certificate of public good to CVPS authorizing construction of the proposed project. I hereby report the following findings and conclusions to the Board in accordance with 30 V.S.A. § 8.

II. FINDINGS

1. CVPS is a duly organized public service corporation with a principal place of business at 77 Grove Street in Rutland, Vermont. Petition at 1.

2. The proposed project will involve the reconstruction of an existing substation on Maple Street in Salisbury, Vermont, built in 1936, that currently contains transmission, distribution and generation facilities. In order to satisfy modern clearance requirements, the components at the existing Maple Street substation will be reconstructed as two separate facilities: one substation will remain at the current site and will contain distribution and generation facilities, and a new transmission substation will be built at a currently undeveloped site off Smead Road in Salisbury, Vermont. The proposed project is intended to improve safety and operating conditions at the existing substation, replace aging infrastructure, improve system performance and reliability, and accommodate expected future load growth. Upton pf. at 3; exhs. CVPS-TOU-1, 2, 3, 4; Fiske pf. at 2, 5-17; Jones pf. at 2-5.

3. The existing substation is the terminus of four 46 kV transmission lines that link the Salisbury substation with CVPS's Brandon, Leicester, Silver Lake and Middlebury substations. Upon completion of the proposed project only two 46 kV lines will terminate at the Maple Street substation. The line from Brandon will terminate on the south side of the substation. The line from Silver Lake will terminate on the north side of the substation. The line from Leicester that currently terminates on the south side of the substation will be rerouted around the west side of the substation and will tie into the line that currently goes to Middlebury; both of these lines will go to the proposed Smead Road transmission substation. Johnson pf. at 2-3; exh. CVPS-JRF-2.

4. In order to reroute the transmission line from Leicester around the Maple Street distribution/generation substation a new pole will be installed outside the southwest corner of the substation yard. The new pole will be 60 feet in total length, with 52 feet above ground. Tr. 10/25/10 at 42-43 (Johnson); letter from Morris L. Silver, Esq., to Susan M. Hudson, Clerk of the Board, dated November 5, 2010, at 4.

5. The existing substation on Maple Street will be entirely reconstructed, and will encompass an area of 53 x 86 feet surrounded by an 8-foot-high fence. The fence will have two

20-foot-wide gates. The reconstructed substation will contain a new 46/12.47 kV, 5.0/7.0 MVA transformer that will replace a 1956-vintage 46/4.16 kV, 1.5/1.725 MVA transformer, and will add three 219-amp regulators to the distribution circuit. The reconstructed substation has been designed as a 46 kV single bus with two bays of steel, each 18 feet wide, 32 feet tall and 16 feet deep, providing for four circuit positions. Two of the circuit positions will be utilized for the distribution circuit, and the remaining two circuit positions will be utilized for the hydro-generation connection. The reconstruction will include new oil containment designed for approximately 150% of the new transformer's oil volume, circuit breakers with microprocessor-based relays, a battery system, protective and control systems and devices, a GPS receiver antenna, fiber optic communications equipment, a new ground grid, and substation-yard lighting, to be installed on the fence, for maintenance and emergency activities. Fiske pf. at 4-8, 12; exh. CVPS-JRF-3; Jones pf. at 3.

6. The proposed Smead Road transmission substation will be located at a currently undeveloped site off Smead Road approximately two miles north of the Maple Street substation. The transmission substation will be accessed by an existing private residential driveway. The gravel driveway will be resurfaced from the intersection with Smead Road up to the proposed substation location. Approximately 385 feet of the existing driveway will be realigned adjacent to the project site. Fiske pf. at 12; tr. 10/25/10 at 60 (Upton).

7. The proposed transmission substation will encompass an area of 120 x 120 feet, 90 x 120 feet of which will be enclosed by an 8-foot-high fence. The substation is designed as a single bus with two bays of steel, each 18 feet wide, 26 feet tall and 16 feet deep, providing four circuit positions. The four circuit positions will be utilized for the 46 kV transmission lines, and will include four 46 kV circuit breakers, complete with foundations, microprocessor-based relaying, metering and associated disconnect switches. The substation will include an 18 x 30-foot control building on the west corner of the substation yard. The control building will accommodate the protection and control panels, 125 Vdc battery system, SCADA [supervisory control and data acquisition] equipment, fiber optic communications equipment, AC/DC distribution panels, and other control devices. A GPS receiver antenna will be mounted on the gable end of the control building. A new ground grid will be installed in accordance with current

grounding standards. New station service will be through a 46 kV/120V, 25 KVA transformer. Fiske pf. at 13-15, 17; exh. CVPS-JRF-11, 14.

8. There will be six new poles at the proposed transmission substation site to support the transmission lines. There will be two poles to the southwest of the substation that will be 55 feet in total length, with 47.5 feet above ground. There will be four poles to the northwest of the substation that will be 55, 45, 40 and 35 feet in total length, with 47.5, 38.5, 33.5 and 29 feet above ground, respectively. Exh. CVPS-JRF-9 (revised); letter from Morris L. Silver, Esq., to Susan M. Hudson, Clerk of the Board, dated November 5, 2010, at 3; tr. at 54-55 (Johnson).

Orderly Development of the Region

[30 V.S.A. § 248(b)(1)]

9. The proposed project will not unduly interfere with the orderly development of the region, with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of municipal legislative bodies, and the land conservation measures contained in the plan of the affected municipality. This finding is supported by findings 10 through 14, below.

10. The Salisbury Town Plan does not contain any applicable land conservation measures. Upton pf. at 5.

11. The proposed project has been designed in a manner consistent with the archaeological, biological and environmental objectives of the Salisbury Town Plan. Upton pf. at 3-5; exhs. CVPS-TOU-8, 9, 10, 11, CVPS-JRF-9 (revised), 10 (revised).

12. The proposed project has been designed in a manner consistent with the energy and aesthetic goals of the Addison County Regional Plan. Upton pf. at 6-8.

13. CVPS provided a project description, location maps and preliminary project plans to the Salisbury Selectboard and Planning Commission on January 28, 2010. CVPS provided updated maps, plans, and other required information to the Selectboard and Planning Commission on March 25, 2010, in accordance with 30 V.S.A. § 248(f) and Board Rule 5.402. The Salisbury Planning Commission submitted a letter to CVPS on April 6, 2010, expressing its desire to be an

interested party[1] and receive additional information about the proposed project throughout the Section 248 review process, particularly concerning the issues of noise, visual impacts, archaeological resources and significant wetlands. Upton pf at. 6; exh. CVPS-TOU-7.

14. CVPS staff presented a project description, location maps and preliminary project plans to the Addison County Regional Planning Commission's ("RPC") Energy Committee on January 27, 2010. CVPS staff also attended the regular meeting of the Energy Committee on February 3, 2010, which involved a detailed discussion of the proposed project and the opportunity for specific questions. The Salisbury Selectboard and Planning Commission were invited to the meeting. CVPS provided updated maps, plans, and other required information to the RPC on March 25, 2010, in accordance with 30 V.S.A. § 248(f) and Board Rule 5.402. The RPC did not recommend any changes to the proposed project. Upton pf. at 8-9.

Need for Present and Future Demand for Services

[30 V.S.A. § 248(b)(2)]

15. The proposed project is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation programs and measures and energy efficiency and load-management measures. This finding is supported by findings 16 through 19, below.

16. The proposed project is necessary to address aging infrastructure at the existing substation. The existing transformers are 54 years old and the existing circuit breaker is 55 years old. The failure rate for substation equipment increases dramatically after 40 years. Jones pf. at 3-4, 7.

17. The proposed project is necessary to achieve proper working clearance for operation and maintenance activities at the distribution/generation substation. The proposed working clearances for the redesigned substation will meet current safety codes. Fiske pf. at 4, 12; tr. 10/25/10 at 21 (Fiske).

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1. The Salisbury Planning Commission did not request party status in this docket. The Salisbury Planning Commission was included in the service list for this docket as a statutory interested person.

18. The only portion of the proposed project costs that could be deferred through load reduction is the incremental cost between a smaller 3.75 MVA replacement transformer at the Maple Street distribution/generation substation and the proposed 5.0/7.0 MVA transformer. The incremental cost is approximately $20,000-$30,000 based on 2009 purchase requisitions. The larger transformer provides flexibility for future load transfers. Jones pf. at 4-6.

19. The flexibility for future load transfers between area circuits will require additional projects, including the conversion of the entire Salisbury circuit from 4.16 kV to 12.47 kV and the complete build out of three-phase tie lines between Salisbury and Leicester. The Salisbury voltage conversion is expected to be completed within five years. The build out of the three-phase tie lines could take longer than five years. Tr. 10/25/10 at 17-18 (Fiske); letter from Morris L. Silver, Esq., to Susan M. Hudson, Clerk of the Board, dated November 5, 2010, at 2.

System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

20. The proposed project will not adversely affect system stability and reliability. This finding is supported by findings 21 through 27, below.

21. The proposed project will decrease the likelihood of equipment failure due to age. The larger transformer at the proposed Maple Street distribution/generation substation, combined with the conversion of the area distribution system from 4.16 kV to 12.47 kV, will increase the system's ability to provide backup for customers during emergency and planned outages. Jones pf. at 5; tr. 10/25/10 at 14 (Johnson), 25 (Fiske).

22. The proposed project includes the addition of direct transfer trip ("DTT") schemes from the proposed Smead Road transmission substation to the proposed Maple Street distribution/generation substation. A DTT scheme is a communication method used to trip a circuit breaker from a remote location. This will result in higher-speed fault protection providing improved power system transient stability and will prevent sustained generation islanding and ground fault over-voltages. Fiske pf. at 10; tr. 10/25/10 at 49 (Fiske); exh. JRF-1.

23. The proposed installation of new 46 kV motor-operated air breaks ("MOAB") at the Maple Street distribution/generation substation will provide the ability to remotely sectionalize

faulted line segments between the proposed Smead Road transmission substation and the Maple Street distribution/generation substation and between the Maple Street distribution/generation substation and the Brandon substations. This will reduce outage time for the customers served out of the Maple Street distribution/generation substation following a fault on the 46 kV line. The replacement of the 59-year-old equipment will decrease the likelihood of equipment failure. Fiske pf. at 3-4, 11; exhs. CVPS-JRF-1 and 2.

24. The 641 gang-operated air break ("GOAB") will be converted to a SCADA-controlled MOAB, providing the ability to remotely transfer the radial Leicester load from the Salisbury B1 circuit to Vermont Marble Company's ("VMCO") 46 kV system. Fiske pf. at 11.

25. The proposed Smead Road transmission substation includes four new 46 kV transmission circuit breakers with microprocessor-based relays, and a 46 kV high-impedance bus differential relay scheme. This will result in higher-speed line and bus fault protection resulting in improved power system transient stability. Fiske pf. at 15-16; exh. CVPS-JRF-14.

26. The four new circuit breakers proposed for the Smead Road transmission substation will provide selective fault isolation, minimizing the number of affected customers during a fault situation. A local failure scheme will be installed on the 46 kV vacuum circuit breakers ("VCB") which will increase the reliability to the distribution substations fed from the 46 kV lines coming into the proposed transmission substation. The proposed installation of a breaker bypass switch on one of the VCBs at the Smead Road transmission substation will improve reliability of the 46 kV transmission system following an extended system-wide outage. Fiske pf. at 6, 14-16.

27. The relocation of the transmission infrastructure to the proposed Smead Road substation will create an additional two miles of transmission line serving Leicester customers that will be exposed to risk of fault situations. This will not impact reliability as CVPS is engaged in a program of reestablishing right-of-ways that have become overgrown. Tr. 10/25/10 at 15-16 (Johnson).

Economic Benefit to the State

[30 V.S.A. § 248(b)(4)]

28. The proposed project will result in an economic benefit to the state and its residents. This finding is supported by findings 29 and 30, below.

29. The total construction cost for the proposed project is estimated at $2,500,000. Jones pf. at 5-6.

30. The proposed project benefits CVPS's customers by replacing aging infrastructure, thereby providing increased reliability. Jones pf. at 3-4.

Aesthetics, Historic Sites, Air and Water Purity, the Natural Environment and Public Health and Safety

[30 V.S.A. § 248(b)(5)]

31. The proposed project will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in subsection 1424a(d) and subdivisions 6086(a)(1) through (8) and (9)(K) of Title 10. This finding is supported by findings 32 through 84, below.

Outstanding Resource Waters

[10 V.S.A. § 1424a(d) and 30 V.S.A. § 248(b)(8)]

32. The proposed project is not located on or near any segment of the waters of the state that has been designated as outstanding resources waters by the water resources board. Upton pf. at 24.

Water and Air Pollution

[10 V.S.A. § 6086(a)(1)]

33. The proposed project will not result in undue water or air pollution. This finding is supported by findings 34 through 36, below.

34. The proposed project does not require a state stormwater discharge operating permit as it will not create more than one acre of impervious surfaces. As a construction site greater than one acre in size, the proposed project has received a construction permit under the National Pollutant Discharge Elimination System ("NPDES") program of the Clean Water Act, administered by the Vermont Department of Environmental Conservation ("DEC"). The proposed project qualifies for coverage under DEC's Construction General Permit 3-9020 as a low-risk project. As required by the terms of the permit, construction will be performed in accordance with the DEC Low Risk Site Handbook for Erosion Prevention and Sediment Control, which will provide assurance that construction activities will not result in the discharge of wastes into wetlands or other surface water features. Upton pf. at 10-11; exh. CVPS-TOU-8.

35. Dust will be controlled through the application of chloride as needed during construction. Construction will take place only during daylight hours, which will minimize the effects of noise at neighboring properties. Brush cleared for the proposed transmission substation yard will be chipped on site and will be reused on site or hauled away for reuse offsite. Stumps will be used for fill on site or disposed of at a certified off-site facility in accordance with the Vermont Solid Waste Management Rules. No burning of vegetative waste will take place. Upton pf. at 9-10.

Discussion

CVPS has proposed to limit construction of the substations to daylight hours in order to minimize noise disturbance to neighboring properties. I find it appropriate to further limit construction of the substations to non-holiday weekdays in order to avoid noise disturbance associated with construction at times when area residents are likely at home, that is, on weekends and holidays.

36. The operation of construction equipment and vehicles will result in some emissions into the air. These emissions will not be substantial. Tr. 10/25/10 at 41 (Upton).

Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

37. The proposed project is not located in a headwaters area. Upton pf. at 10; exhs. CVPS-TOU-1 and 3.

Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

38. The proposed project will meet applicable health and Department of Environmental Conservation ("DEC") regulations regarding the disposal of wastes, and will not involve the injection of waste materials or any harmful or toxic substances into groundwater or wells. This finding is supported by findings 39 and 40, below.

39. Brush cleared for the proposed transmission substation yard will be chipped on site and will be reused on site or hauled away for reuse off site. Stumps will be used for fill on site or disposed of at a certified off-site facility in accordance with the Vermont Solid Waste Management Rules. Upton pf. at 10.

40. Both the proposed generation step-up transformer and the distribution power transformer at the distribution/generation substation will be installed with secondary oil-containment systems. The design of the secondary oil-containment systems is consistent with IEEE [Institute of Electrical and Electronics Engineers] protocols. Upton pf. at 11; exh. CVPS-JRF-8.

Water Conservation

[10 V.S.A. § 6086(a)(1)(C)]

41. The proposed project will not require the use of water. Upton pf. at 12.

Floodways

[10 V.S.A. § 6086(a)(1)(D)]

42. The proposed project will not restrict or divert the flow of floodwaters, and will not significantly increase the peak discharge of the river within or downstream from the area of

development and endanger the health, safety, or welfare of the public or riparian owners during flooding. This finding is supported by findings 43 and 44, below.

43. The proposed transmission substation is not located in a floodway or floodway fringe. Upton pf. at 12.

44. The Maple Street distribution/generation substation is of necessity located adjacent to an existing hydro generation facility on the banks of the Leicester River, and is located within the floodway or floodway fringe of the Leicester River. The distribution/generation substation will be reconstructed entirely within the confines of the existing substation yard and fence. There will be no additional restrictions or diversions of flood waters, and no additional displacement of water. Upton pf. at 12; Upton supplemental pf. of September 30, 2010, at 3; Upton supplemental pf. of January 31, 2011, at 2.

Streams

[10 V.S.A. § 6086(a)(1)(E)]

45. The proposed project will maintain the natural conditions of the stream in the vicinity of the proposed transmission substation and will not endanger the health, safety, or welfare of the public or adjoining landowners. This finding is supported by finding 46, below.

46. The proposed transmission substation is not located on or adjacent to a streambank; the substation fence will be 150 feet from the streambank at its closest point. The proposed distribution/generation substation is not located on or adjacent to a streambank. Upton pf. at 12; exhs. CVPS-TOU-1, CVPS-JRF-10 (revised).

Shorelines

[10 V.S.A. § 6086(a)(1)(F)]

47. The proposed project will not have an adverse impact on shorelines. This finding is supported by findings 48 through 52, below.

48. The proposed distribution/generation substation must of necessity be located on a shoreline in order to fulfill the purpose of the distribution/generation substation, and the project will, insofar as possible and reasonable in light of its purpose, retain the shoreline and the waters

in their natural condition, allow continued access to the waters and the recreational opportunities provided by the waters, retain or provide vegetation which will screen the development from the waters and stabilize the bank from erosion, as necessary, with vegetation cover. This finding is supported by findings 49 through 52, below.

49. The proposed transmission substation is not located on a shoreline. The existing driveway at the proposed transmission substation site will be slightly relocated directly in front of the substation. Grading between the driveway and the streambank will be constructed at a 2:1 slope and maintain a buffer of 50-150 feet from the streambank. The existing condition of the stream will be enhanced in the area where transmission lines will be retired. Upton pf. at 12-13; exhs. CVPS-TOU-3, CVPS-JRF-10 (revised).

50. The distribution/generation substation is associated with an existing hydro generation facility and is adjacent to the banks of the Leicester River. The reconstructed substation will be entirely within the confines of the existing substation yard and fence, and will not be located between the mean high- and low-water marks of the Leicester River. Sediment barriers will prevent any discharges to the river during construction. Upton pf. at 13; Upton supplemental pf. of September 30, 2010, at 2-4.

51. The distribution/generation substation must of necessity be located near the shoreline as it provides a connection between the hydro generation facility and the regional subtransmission network. Upton supplemental pf. of September 30, 2010, at 3.

52. The reconstructed distribution/generation substation will maintain the shoreline in its current state. No public access to the waters is presently provided at the facility, and no new restrictions will be imposed. The bank closest to the substation is cleared of trees, is well vegetated and stable in its current condition, as it has been since the construction of the facility. Existing screening will be maintained along the banks. Tree removal will not be necessary, and both shading and visual screening will be unchanged. Any side trimming of trees will be minor and will be limited to a couple of small hardwood trees that do not currently provide shading. The potential for erosion will not be impacted by the proposed project. Upton supplemental pf. of September 30, 2010, at 2-4; tr. 10/25/10 at 10-11 (Upton).

Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

53. The proposed project will not violate the rules relating to significant wetlands. This finding is supported by findings 54 through 57, below.

54. There is one Class 2 wetland and five Class 3 wetlands adjacent to the proposed transmission substation. There are three Class 3 wetlands adjacent to the distribution/generation substation. Upton pf. at 13; exhs. CVPS-TOU-1, CVPS-JRF-2 and 9 (revised).

55. The distribution/generation substation will be reconstructed within the footprint of the existing facility and there will be no new construction in the adjacent wetlands. Upton pf. at 14; exh. CVPS-JRF-2.

56. The proposed transmission substation will not directly impact the adjacent Class 2 wetland. Grading for the substation yard will involve fill in 5,557 square feet of the upland buffer associated with the Class 2 wetland, largely in the existing cleared transmission corridor, and 2,286 square feet in a Class 3 wetland. Two poles will be installed in a very low-functioning Class 3 wetland within the existing cleared transmission corridor. If site conditions warrant, CVPS will use construction matting to avoid any soil disturbance to the Class 3 wetland during construction. An existing section of 46 kV transmission line that currently crosses through the Class 2 wetland will be retired. Upton pf. at 14; exh. CVPS-JRF-9 (revised); tr. 10/25/10 at 56 (Upton).

57. On July 12, 2010, DEC issued Conditional Use Determination #2010-032 authorizing the activities proposed within the upland buffer of the Class 2 wetland, with the following conditions:

> A. All activity shall be completed, operated and maintained as set forth in accordance with the proposal in Conditional Use Determination Application #2010-032 and all submittals listed in Finding of Fact #7 above. No material or substantial changes shall be made in the project without the written approval of the Vermont Wetlands Office.
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> B. The applicant shall notify the Vermont Wetlands Office in writing prior to the start of this project.
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> C. A continuous line of orange snow fence shall be installed along the limit of disturbance prior to the start of construction. A continuous line of silt fence shall be

properly installed by the applicant immediately upgradient of the snow fence prior to any construction and shall be regularly maintained. Care should be taken to ensure that silt fence is installed on the contour and not in areas of concentrated flow such as stream channels or ditches. Sediment shall be cleaned out before and after any significant storm event or when they have reached less than half the height of the fence. Removed sediments shall be disposed of in a stable, upland area outside the 50-foot buffer zone at least 200 feet from waters of the state and stabilized immediately with seed and mulch at a minimum. All other disturbed soils shall be seeded and mulched within 48 hours of final grading. All sediment barriers and construction fencing shall be removed following the successful establishment of vegetation.

D. The applicant shall have this Conditional Use Determination recorded in the land records of the town of Salisbury for all affected lands. Any future deed for such lands shall reference this Conditional Use Determination. Within 30 days of the date of issuance of this Conditional Use Determination, the applicants shall supply the Vermont Wetlands Office with a copy of correspondence with the town of Salisbury certifying that the required recordings have been made.

E. All construction activities in the wetland and adjacent 50-foot buffer zone shall be performed in compliance with Condition A and shall be completed within three years of the date of this Conditional Use Determination or this Conditional Use Determination will terminate. The Secretary may grant an extension to this three-year period. Any request for an extension must be received by the Department at least 30 days prior to the end of the three-year period in order to prevent the termination of this Conditional Use Determination. A request for extension will be considered a minor modification.

F. The wetland boundary determination is valid for five years from the date of this determination. The delineation will need to be re-evaluated by a qualified wetland consultant if the project is not constructed, or additional impacts are proposed, after the five-year time period expires.

G. The terms and conditions of this decision shall run with the land.

H. The applicant shall monitor the portion of the wetland in question annually during early July for five years following construction for the nuisance plant species purple loosestrife (*Lynthrum salicaria*) and common reed (*Phragmites australis*). All nuisance plants found shall be pulled by hand and disposed of by burial or burning in a non-wetland location. Additionally, the contractor's equipment shall be cleaned so as to contain no observable soil or vegetation prior to work in wetlands and buffer zones to help prevent the spread of invasive species.

Exh. CVPS-TOU-11.

Sufficiency of Water and Burden on Existing Water Supply

[10 V.S.A. §§ 6086(a)(2) & (3)]

58. The proposed project will not require the use of water. Upton pf. at 12.

Soil Erosion

[10 V.S.A. § 6086(a)(4)]

59. The proposed project will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result. This finding is supported by findings 60 and 61, below.

60. The distribution/generation substation will be constructed within the footprint of the existing facility. Upton pf. at 15; exh. CVPS-JRF-2.

61. The proposed transmission substation qualifies for coverage under DEC's Construction General Permit 3-9020 as a low-risk project. As required by the terms of the permit, construction will be performed in accordance with the DEC Low Risk Site Handbook for Erosion Prevention and Sediment Control. Upton pf. at 11; exh. CVPS-TOU-8.

Transportation Systems

[10 V.S.A. § 6086(a)(5)]

62. The proposed project will not cause unreasonable congestion or unsafe conditions with respect to the use of highways, waterways, railways, airports and airways, and other means of transportation existing or proposed. This finding is supported by findings 63 and 64, below.

63. Access to the distribution/generation substation will be unchanged. Access to the proposed transmission substation will be via an existing residential driveway that will be resurfaced and slightly realigned at the substation entrance. Upton pf. at 15-16.

64. During construction there will be increased road traffic, including construction vehicles and vehicles delivering large pieces of equipment. Construction of the proposed transmission substation could require approximately 20 dump trucks per day to haul in appropriate fill. While the transmission substation was designed to balance cut and fill at the site, certain materials will still be required for the purposes of drainage or yard surfacing. Construction will also require

approximately 10 passenger vehicle trips per day to deliver workers to the site. Reconstruction of the distribution/generation substation will require fewer vehicle trips per day because the site is smaller and will require less site preparation. Construction-related traffic impacts will be temporary in nature. Once construction is complete traffic for substation inspections and maintenance will be low in volume and frequency. If construction traffic results in any damage to municipal roads, CVPS will cooperate with the Salisbury Road Commissioner and Selectboard to make any repairs necessary to restore the roads to their previous condition. Upton pf. at 15-16, 23-24; tr. 10/25/10 at 30-31 (Johnson).

Educational and Municipal Services

[10 V.S.A. § 6086(a)(6) & (7)]

65. The proposed project will not place an unreasonable burden on the ability of the municipality to provide educational services or on the ability of the local government to provide municipal or governmental services. Upton pf. at 16.

Aesthetics, Historic Sites and Rare and Irreplaceable Natural Areas

[10 V.S.A. § 6086(a)(8)]

66. The proposed project will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites or rare and irreplaceable natural areas. This finding is supported by findings 67 through 80, below.

Aesthetics

67. The proposed project will not have an undue adverse effect on the scenic or natural beauty of the area or aesthetics. This finding is supported by findings 68 through 75, below.

68. The distribution/generation substation is located at the bottom of a small ravine and is 40-60 feet below the elevation of Maple Street. The site is wooded on the east and west sides. There is limited visibility of the substation facilities due to the combination of topography and surrounding vegetation. Upton pf. at 17-18.

69. The proposed design for the distribution/generation substation includes structural steel supports that are approximately six feet higher than the existing structures; the tallest piece of substation equipment will be approximately 32 feet above grade. Upton pf. at 18.

70. In order to reroute the Leicester 46 kV transmission line around the west side of the distribution/generation substation, CVPS proposes to place a new pole, approximately 52 feet in height above ground, off the southwest corner of the substation. An existing distribution pole to the east of the substation will need to be replaced in order to accommodate the transmission feed to a portable substation while the distribution/generation substation is out of service. The current pole, approximately 33 feet in height above ground, will be replaced with a pole that is 38.5 feet in height above ground. Because the bases of these proposed poles are approximately 40-60 feet below street level, and because there is vegetation along the road, the proposed poles should not present a new visual element. Johnson pf. at 2-3; exh. CVPS-JRF-2; tr. 10/25/10 at 43-47, 51-53 (Johnson and Upton); letter from Morris L. Silver, Esq., to Susan M. Hudson, Clerk of the Board, dated November 5, 2010, at 4.

71. The proposed transmission substation will be located in the southeast corner of a "T" intersection of two existing 46 kV transmission line corridors. The top of the "T" runs north-south and the base runs to the east. The location of this intersection is between Smead Road and U.S. Route 7 in Salisbury. Upton pf. at 18-19; exhs. CVPS-TOU-3, 4 and CVPS-JRF-9 (revised).

72. The proposed transmission substation site is accessed from Smead Road over an existing residential driveway. The site is approximately 650 feet east of Smead Road and approximately 50-60 feet lower in elevation than the road. The residence served by the driveway is approximately 600 feet to the northwest of the substation site. The land between the site and the road is wooded, as are the areas to the south and west. The substation site is currently forested. Upton pf. at 19; exh. CVPS-TOU-4.

73. The proposed transmission substation will be fully visible from the existing residential driveway for only a short distance, as the driveway is wooded on both sides. There will be limited visibility of the substation from the home located at the end of the driveway. Vegetative screening will be installed between the substation and driveway. Upton pf. at 17-18.

74. The proposed transmission substation will not be visible from any other residence or public road. Upton pf. at 18.

75. The substations will not contain equipment that produce significant noise. The reconstructed distribution/generation substation will have equipment that makes some noise, but that noise will be quieter than is currently present, as the newer equipment tends to be quieter than the equipment it is replacing. Upton pf. at 18; tr. 10/25/10 at 38 (Upton).

Discussion

I recommend that Board staff conduct a post-construction site visit to investigate the adequacy of vegetative screening and to ensure that the substation equipment does not produce significant noise. If it is found that the vegetative screening is inadequate or that the substation equipment produces significant noise, the Board should reserve the ability to require additional mitigation.

Historic Sites

76. The proposed project will not have an undue adverse effect on historic sites. This finding is supported by findings 77 through 79, below.

77. The Northeast Archaeological Resource Center ("NEARC") of Farmington, Maine, was retained to investigate the project area for the presence of historic and archeological sites. The Vermont Division for Historic Preservation ("DHP") approved NEARC's scope of work. Upton pf. at 3.

78. NEARC discovered one Native American archeological site, labeled VT-AD-1537, within the project boundaries of the proposed Smead Road transmission substation. The site was determined to be potentially eligible for inclusion in the State and Federal Registers of Historic Places. NEARC recommended that the site be avoided, if possible. Exh. CVPS-TOU-9.

79. The DHP concluded that construction of the proposed transmission substation will not have an undue adverse effect on historic sites provided that the following requirements are incorporated into the Certificate of Public Good:

> 1. The Petitioner will identify Locus 1 of VT-AD-1537 as a not-to-be disturbed archaeological buffer zone on the overall site plan and all other relevant site plans.

2. Topsoil removal, grading, scraping, cutting, filling, stockpiling, logging or any other type of ground disturbance is prohibited within the buffer zone without written permission from the Public Service Board and the Division for Historic Preservation.

3. An exclusionary fence constructed of snow-fencing or other structural barrier shall be erected between any construction area and the VT-AD-1537 buffer zone during all construction activity adjacent to the buffer zone limits.

4. To ensure long-term protection of the VT-AD-1537, two concrete markers with inserted brass plaques bearing the site number VT-AD-1537, an archaeological grid coordinate, and the phrase "no ground disturbance permitted" shall be placed within the protected area. The marker placements shall be completed within five years of the issuance of the Certificate of Public Good.

5. In the event that maintenance of all or part of the archaeological buffer zone is no longer desirable, or improvements requiring ground disturbance are proposed in the buffer zone, archaeological studies to further evaluate or mitigate any impact to the affected areas will be carried out by a qualified consulting archaeologist prior to any disturbance.

6. All archaeological studies must be conducted by a qualified consulting archaeologist and must follow the DHP's Guidelines for Conducting Archaeological Studies in Vermont. The petitioner's archaeological consultant must submit any scope of work to the DHP for review and approval.

7. Any part of the archaeological buffer zones will not be impacted until any necessary mitigation measures have been carried out. Mitigation may include but is not limited to further site identification, evaluation, data recovery, redesign of one or more proposed project components, or modification of the buffer zone boundaries or the specific conditions that refer to the same.

8. Mitigation measures will be discussed with and approved by the DHP prior to implementation and a copy of all mitigation proposals will be filed with the Public Service Board. The archaeological studies will result in one or more final reports, as appropriate, that meet the Division's Guidelines for Conducting Archaeological Studies in Vermont. Copies will be submitted to the Public Service Board and the DHP.

Exh. CVPS-TOU-9.

Rare or Irreplaceable Natural Areas

80. There are no known rare or irreplaceable natural areas at the project sites. Exh. CVPS-TOU-1.

Necessary Wildlife Habitat and Endangered Species

[10 V.S.A. § 6086(a)(8)(A)]

81. The proposed project will not destroy or significantly imperil necessary wildlife habitat or any endangered species. This finding is supported by findings 82 and 83, below.

82. There are no known endangered species sites or areas of necessary wildlife habitat in the proposed project area. Upton pf. at 23; exhs. CVPS-TOU-1 and 3.

83. The site for the proposed transmission substation is located within an area known to provide habitat for the Indiana bat, a state-listed endangered species. For this reason, CVPS coordinated its planning efforts with the Department of Fish and Wildlife ("DFW"). A representative of DFW visited the site on May 7, 2010, and conducted an inventory of potential roost trees within the area of proposed clearing. DFW determined that the clearing for the proposed transmission substation and associated transmission line connections will not have a significant impact on Indiana bats or their habitat. Upton pf. at 23.

Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

84. The proposed project will not unnecessarily or unreasonably endanger the public or quasi-public investment in any governmental and public utility facility, service, or lands, or materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of or access to the facility, service, or lands. This finding is supported by finding 85, below.

85. The closest public investments to the proposed project sites are Maple Street and Smead Road. If construction traffic results in any damage to these roads, CVPS will cooperate with the Salisbury Road Commissioner and Selectboard to make any repairs necessary to restore the roads to their previous condition. Upton pf. at 23.

Least-Cost Integrated Resource Plan

[30 V.S.A. § 248(b)(6)]

86. The proposed project is consistent with the principles for resource selection expressed in CVPS's approved least-cost integrated resource plan ("IRP"). The IRP discusses CVPS's asset management strategy ("AMS"). The proposed project will replace an old transformer, circuit breakers and associated equipment which are all parts of the at-risk aging infrastructure described in the AMS. The proposed project will also improve both reliability and efficiency as called for in the IRP. Jones pf. at 7.

Compliance with the Electric Energy Plan

[30 V.S.A. § 248(b)(7)]

87. The proposed project is in compliance with the electric energy plan ("Plan") approved by the Department of Public Service under § 202. This finding is supported by findings 88 and 89, below.

88. Vermont's Twenty-Year Electric Plan sets forth several basic objectives that must be satisfied in order to serve the public interest. In general, these objectives call for the provision of electric service that balances the following policy goals: efficient, adequate, reliable, secure, sustainable, affordable, safe, and environmentally sound, while encouraging the state's economic vitality and maintaining consistency with other state policies. The proposed project strikes a balance among the Plan's objectives. Jones pf. at 7-8.

89. On November 24, 2010, the Department filed a letter stating that the proposed project is consistent with the Vermont Twenty-Year Electric Plan, pursuant to § 202(f). Letter from Geoffrey Commons, Esq., to Morris L. Silver, Esq., dated November 24, 2010.

Existing or Planned Transmission Facilities

[30 V.S.A. § 248(b)(10)]

90. The proposed project can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers. The project will incorporate existing transmission lines and right-of-ways. The replacement of aging transmission

infrastructure and the resulting compliance with modern working clearances will result in improved safety conditions for CVPS utility workers. Jones pf. at 8; Johnson pf. at 2-3; Fiske pf. at 4, 12.

III. DISCUSSION

CVPS has provided sufficient evidence to demonstrate that the proposed project complies with the Section 248 criteria. I recommend that the Board issue a CPG, with conditions, authorizing construction of the proposed project.

On September 30, 2010, CVPS and the Department filed a Stipulation and proposed findings of fact and order in which the parties agreed that the Board should issue an order and CPG substantially in the form of the Proposal for Decision provided. The parties waived their rights under 3 V.S.A. § 811 to review and comment upon the Proposal for Decision, and to present oral argument, provided that the Proposal for Decision is substantially similar to that attached to the Stipulation. ANR was not a signatory to the Stipulation.

At the October 25, 2010, Technical Hearings, both the Department and CVPS stated that, pursuant to the Stipulation, they continued to waive their rights to comment upon the Proposal for Decision. ANR stated that ANR would not require an additional filing opportunity if the CPG incorporated conditions regarding the wetland permit that ANR had already issued. I have incorporated the conditions regarding the wetland permit into the proposed CPG, and I therefore conclude that this Proposal for Decision is not adverse to ANR's interests. Accordingly, and given that the Department and CVPS have waived in writing their rights to comment, this Proposal for Decision is not being circulated for comment, pursuant to 3 V.S.A. § 811.

IV. CONCLUSION

Based upon the evidence in the record, I conclude that the proposed project, with the conditions identified below:

(a) will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions, and the recommendations of the municipal legislative bodies;

(b) is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation programs and measures and energy efficiency and land management measures;

(c) will not adversely affect system stability and reliability;

(d) will result in an economic benefit to the state and its residents;

(e) will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) and §§ 6086(a)(1) through (8) and (9)(K);

(f) is consistent with the principles of least-cost integrated resource planning;

(g) is in compliance with the electric energy plan approved by the Department under § 202 of Title 30 V.S.A.;

(h) does not involve a facility affecting or located on any segment of the waters of the State that has been designated as outstanding resource waters by the Water Resources Board;

(i) does not involve a waste-to-energy facility; and

(j) can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers.

I recommend that the Board approve the proposed project and issue a CPG for construction of the proposed project with the conditions set forth in the proposed Order and CPG, below.

Dated at Montpelier, Vermont, this 25th day of February, 2011.

s/ Thomas Knauer
Thomas Knauer
Hearing Officer

V. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board of the State of Vermont that:

1. The findings, conclusions, and recommendations of the Hearing Officer are adopted.

2. The proposed construction of a new 46 kV electrical substation, and the reconstruction of an existing substation containing 46 kV/12.47 kV distribution facilities and step-up facilities for hydro generation by Central Vermont Public Service Corporation ("CVPS") in Salisbury, Vermont, will promote the general good of the State of Vermont in accordance with 30 V.S.A. Section 248, and a certificate of public good to that effect shall be issued.

3. Construction, operation, and maintenance of the proposed project shall be in accordance with the plans and evidence as submitted in these proceedings. Any material deviation from these plans must be approved by the Board.

4. Prior to proceeding with construction, CVPS shall obtain all necessary permits and approvals. Construction, operation, and maintenance of the proposed project shall be in accordance with such permits and approvals, and with all other applicable regulations, including those of the Agency of Natural Resources generally, and Conditional Use Determination #2010-032 specifically.

5. Construction, operation, and maintenance of the proposed project shall be in accordance with the requirements identified by the Division for Historic Preservation, as set forth in Exhibit CVPS-TOU-9.

6. Construction of the proposed project shall take place during daylight hours, and shall be limited to non-holiday weekdays.

7. Within 30 days of the completion of construction of the proposed project (including installation of all landscaping), CVPS shall arrange a site visit with the Board and all parties to review the effectiveness of the aesthetic mitigation measures, as installed. The Board reserves the right to require CVPS to install additional mitigation measures as a result of this inspection.

Dated at Montpelier, Vermont, this 3rd day of March, 2011.

s/ James Volz)
)
) PUBLIC SERVICE
)
s/ David C. Coen) BOARD
)
) OF VERMONT
s/ John D. Burke)

OFFICE OF THE CLERK

FILED: March 3, 2011

ATTEST: s/ Susan M. Hudson
Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)

Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.